

PROJECT facts

DEPARTMENT OF ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY

TEXAS ELECTRONIC COMPLIANCE AND APPROVAL PROCESS (ECAP) PILOT PROJECT

Background/Problem

Texas provides about 20% of the total daily US domestic oil production and 29% of annual natural gas production. In 1999, the oil and gas industry contributed over \$43 billion to the state's economy. In the late 1990's both the industry and the Railroad Commission recognized the need to operate more efficiently because of rising costs, lower staffing levels and increased budget restrictions. In order to sustain operations and assure adequate future recovery, the industry needed to reduce the costs of oil and gas operations, including the cost of obtaining permits to conduct various operations, such as drilling. The Texas Railroad Commission (RRC), on the other hand, also needed to achieve greater efficiency and cost reductions in the handling of oil and gas permit applications, which numbered 150,000 in 1997, with 15,000 of those for drilling permits.

The paper-based drilling permit process entailed an application mailed to the Commission with the appropriate fees and attachments. The information was entered by an operator on mainframe databases, with mainframe inquiry to review applicant information and additional research to review the plat filed with each application. The process averaged about four working days from the time the mailed-in application was received at the Commission. The only type of electronic reporting available to the industry was one-way performance reporting using Electronic Data Interchange (EDI) file transfer, an inefficient system that was difficult to operate and expensive to maintain.

The Commission began to search for a streamlined paperless system that would move beyond the EDI reporting of performance data to handle two-way electronic application and permitting and shorten the time and cost required to complete the permit process. The chosen system, called Electronic Compliance and Approval Process (ECAP), is an integrated database that feeds an Internet-based interactive permitting system. Incorporation of the drilling permit process was selected for the pilot project because it represents the first step in the oil and gas compliance life cycle and because it covers the gamut in technological challenges. A pilot project began in September 1999 with the funding of a \$700,000 grant from the U.S. Department of Energy and an appropriation of \$1.4 million from the Texas Legislature. The costs of the three-phase drilling permit pilot and eventual incorporation of all permit applications were estimated to be \$3.1 million.

Project Description/Accomplishments

The ECAP system developed by the RRC represents a joint partnership between the Commission, the U.S. Department of Energy, and the oil and gas industry. It provides two-way electronic communications for improving efficiency in handling the compliance aspect of oil and gas regulation and for significantly reducing administrative and operating costs for all parties. Implementing an electronic process for the drilling permit resolves technical issues covering secured transactions, electronic fund transfers, electronic plats and attachments, record archiving and storage, and electronic approval. The drilling permit model is the prototype for automation of the remaining compliance activities. The first phase of the project was completed and capped on May 11, 2000 with a public display of the first RRC drilling permit electronically filed, processed and approved by the ECAP system. The second and third ECAP phases, scheduled for implementation by September 2001, will provide the ability to file all types of drilling permits, even the most complex, and will incorporate GIS integration.

PRIMARY PROJECT PARTNER

Texas Railroad
Commission
Austin, TX

OIL RESEARCH PROGRAM Effective Environmental Protection

MAIN SITE State of Texas

TOTAL ESTIMATED COST \$1.4 million

COST SHARING DOE - \$0.7 million Non-DOE - \$0.7 million



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Project Benefits/Impacts

The previous Texas oil and gas permitting was a linear, paper-based process submitted by mail, that took up to four days to process. It involved time-consuming main-frame review of the application and physical review of the accompanying plat. Questions about accuracy or missing attachments delayed the process. The ECAP system completely eliminates the need for the operator to supply information the Commission already has on file in its databases. It includes a streamlined application process that can be completed on-line, the electronic payment of permit fees and the capability to submit plat information in digital or scanned formats. This eliminates much of the editing required in the previous process and reduces the need for filing corrected reports. An operator with an Internet connection can file anytime from any place, and costs of filing are greatly reduced. The processing and approvals should be completed in less than half the time of mailed-in applications, in many cases less than a day. Operators and business consultants will have quick, convenient access to data filed through the ECAP system via the Internet.

Taxpayers benefit through more efficient government regulation. Information will be captured in electronic format, eliminating the need to re-key data and reducing the opportunity for error. Hard-copy storage will be greatly reduced. ECAP technology will support electronic filing and process improvements in other areas of the agency. ECAP will also increase public access to valuable data because electronic transactions will be available on the Commission web site 24 hours a day, 7 days a week.

Estimated savings of \$200 to \$400 per drilling permit processed through the ECAP system represent a potential annual savings of \$3-6 million for industry. Once the ECAP system is fully implemented to include other performance reports and compliance permits, total annual industry savings in Texas, based upon only 25% utilization of electronic filing, is expected to be \$17,500,000. Higher utilization will obviously yield correspondingly greater benefits.

With gradually increasing utilization levels of the ECAP System, realized efficiencies should provide the state with cumulative savings of \$750,000 by year 5 and with 100 percent utilization in year 7 an annual savings of \$1.2 million. The ECAP project is developing technology solutions that other state agencies can utilize. As the state with the largest and most diverse population of operators and wells in this country, Texas is positioned to become a pacesetter in embracing new technologies to develop cost-saving, timely solutions. By sharing its experiences and successes, Texas can become a model for other state and federal regulatory agencies.